

WHAT IS CLAIMED IS:

1. A visual inspection apparatus, comprising:

imaging means for capturing images of at least three areas arranged in a line on an object;

image comparison means for dividing the areas into at least one group, each group including at least consecutive three of the areas; for designating one of the areas as a subject area and other two of the areas as comparison areas for the subject area, the comparison areas being in the same group with the subject area and within a predetermined distance from the subject area; and for comparing the image of the subject area with the images of the comparison areas; and

defect detection means for detecting a defect in the object in accordance with the comparison between the images of the areas by the image comparison means,

wherein the image comparison means is configured to number the areas in each group along the line and to select the comparison areas as follows:

when the subject area is odd-numbered and is not one of ends of odd-numbered areas in the group, the comparison areas are two odd-numbered areas closest to the subject area;

when the subject area is one of the ends of the odd-numbered areas in the group, the comparison areas are one odd-numbered area and one even-numbered area closest to the subject area;

when the subject area is even-numbered and is not one of ends of even-numbered areas in the group, the comparison areas are two even-numbered areas closest to the subject area; and

when the subject area is one of the ends of even-numbered areas in the group, the comparison areas are one even-numbered area and one odd-numbered area closest to the subject area.

2. The visual inspection apparatus as defined in claim 1, wherein the areas are arranged in a row on the object.

3. The visual inspection apparatus as defined in claim 1, wherein the imaging means relatively scans the object along the line to sequentially capture the images of the areas.

4. The visual inspection apparatus as defined in claim 1, wherein the imaging means relatively scans the object along the line by one of a CCD line sensor and a TDI sensor to sequentially capture the images of the areas.
5. A visual inspection method, comprising the steps of:
  - capturing images of at least three areas arranged in a line on an object;
  - dividing the areas into at least one group, each group including at least consecutive three of the areas;
  - designating one of the areas as a subject area and other two of the areas as comparison areas for the subject area, the comparison areas being in the same group with the subject area and within a predetermined distance from the subject area; and
  - comparing the image of the subject area with the images of the comparison areas to determine whether the subject area is defective,

wherein the designating step comprises the steps of numbering the areas in each group along the line and selecting the comparison areas as follows:

  - when the subject area is odd-numbered and is not one of ends of odd-numbered areas in the group, the comparison areas are two odd-numbered areas closest to the subject area;
  - when the subject area is one of the ends of the odd-numbered areas in the group, the comparison areas are one odd-numbered area and one even-numbered area closest to the subject area;
  - when the subject area is even-numbered and is not one of ends of even-numbered areas in the group, the comparison areas are two even-numbered areas closest to the subject area; and
  - when the subject area is one of the ends of even-numbered areas in the group, the comparison areas are one even-numbered area and one odd-numbered area closest to the subject area.
6. The visual inspection method as defined in claim 5, wherein the areas are arranged in a row on the object.
7. The visual inspection method as defined in claim 5, wherein the capturing step comprises the step of relatively scanning the object along the line to sequentially capture the images of the areas.

8. The visual inspection method as defined in claim 5, wherein the capturing step comprises the step of relatively scanning the object along the line by one of a CCD line sensor and a TDI sensor to sequentially capture the images of the areas.